Technical Raster Transfer

Using:

SAZTEC International's Data

MIL-R-28002A (Raster)

Quick Short Test Report

22 October 1993

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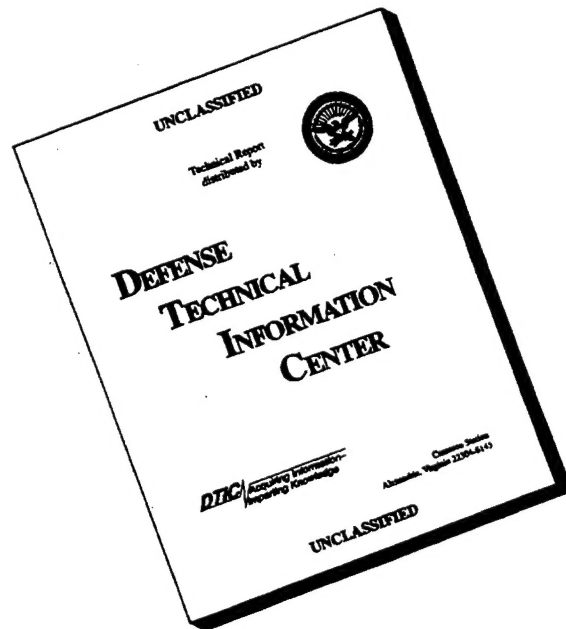
Quick Short Test Report

22 October 1993

Prepared By
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Contents

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALS) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALS standards for technical data interchange and to demonstrate the technical capabilities and operational suitability of those standards. Two general categories of tests are performed to evaluate the standards; formal and informal.

Formal tests are large and comprehensive, which follow a written test plan, require specific authorization from the DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN technical staff, to broaden the testing base. They include representative samples of the many systems and applications used by AFCTN participants. They also allow the AFCTN staff to gain feedback from many industry and government interpretations of the standards, to increase the base of participation in the CALS initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation of their latest implementation (interpretation) of the standards, interact with the AFCTN technical staff, gain experience using the standards, and develop increased confidence in them. The results of informal tests are reported in Quick Short Test Reports (QSTRs) that briefly summarize the standard(s) tested, the hardware and software used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was
to analyze SAZTEC International's interpretation and use of
the CALS standards in transferring technical Raster data.
SAZTEC used its CALS Technical Data Interchange System to
produce data and delivered it to the AFCTN technical staff
on a 3.5 inch disk.

The stated purpose of the test was to evaluate the Raster
output and MIL-STD-1840A was not addressed.

2. Test Parameters

Test Plan: AFCTB 93-101

Date of
Evaluation: 22 October 1993

Evaluator: George Elwood
                                    Air Force CALS Test Bed
                                    Det 2 HQ ESC/AV-2P
                                    4027 Colonel Glenn Hwy
                                    Suite 300
                                    Dayton OH   45431-1672

Data
Originator: Terri Dieckhoff
                                    SAZTEC International
                                    Newmark Centre, Bldg 9
                                    8741 Gander Creek Drive
                                    Miamisburg OH   45342
                                    (513) 439-3750

Data
Description: Technical Raster Test
                                            3 Raster files

Data
Source System:

                Raster

                        HARDWARE
                                Unknown
                        SOFTWARE
                                Unknown

Evaluation Tools Used:

                MIL-R-28002 (Raster)
                        SUN SparcStation 2
                                Carberry *CADLeaf Plus v3.1*
                                AFCTN *validg4*
                                AFCTN *xrastb.sun4*
                                IGES Data Analysis (IDA) *IGESView v3.0*
                                Island Graphics *IslandPaint v3.0*
                                Rosetta Technologies *Prepare/Preview*

SGI Indigo2
      AFCTN *xrastb.sgi*
PC 486/50
      AFCTN *validg4*
      IDA *IGESView Windows*
      Inset Systems *HiJaak Window v1.0*

**Standards
Tested:**   MIL-R 28002A

3. 1840A Analysis

3.1 External Packaging

The 3.5" disk was hand delivered to the Air Force CALS Test Bed (AFCTB) without any enclosure. The stated purpose of the test was to evaluate the data files and not the MIL-STD-1840A packaging.

3.2 Transmission Envelope

The 3.5" disk received by the AFCTB contained MIL-R-28002A files. The files were not named per the standard conventions.

3.2.1 Tape Formats

Not evaluated.

3.2.2 Declaration and Header Fields

No Document Declaration files were included as part of this evaluation.

A visual inspection of the CALS headers on all three Raster files revealed an error in the "rdensty" field. All three files had a value of 0301 which is not one of the acceptable values. The value should have been 0300. The value "NONE" was inserted into the "srcdocid" and "dstdocid" and should have contained actual source information.

The files do not meet the requirements defined in MIL-STD-1840A or MIL-R-28002A, para. 3.1.1.4.

4. IGES Analysis

The 3.5" disk contained no Initial Graphics Exchange Specification (IGES) files.

5. SGML Analysis

The disk contained no Standard Generalized Markup Language (SGML) files.

6. Raster Analysis

The disk contained three Raster files. All files were evaluated using the AFCTN *validg4* utility. This program reported all three files meet the CALS MIL-R-28002A specification.

The files were read into the AFCTN *xrastb.sgi* viewing utility. No problems were noted although a slight angle was noted.

The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The files were converted using another utility available within the AFCTB without a reported error. The resulting files were read into Island Graphics' *IslandPaint*, displayed and printed.

The Raster files were read and displayed into Carberry's *CADLeaf* software without a reported error.

The files were read into IDA's *IGESView* and *IGESView for Windows* without a reported error.

The files were read into Inset Systems' *HiJaak for Windows* without a reported error.

The Raster files were converted using Rosetta Technologies' *Prepare* without a reported error. The resulting files were read into Rosetta Technologies' *Preview*, displayed and printed.

The Raster files do not meet the CALS MIL-R-28002A specification, due to the error in the "rdensty" field.

7. CGM Analysis

The disk contained no Computer Graphics Metafile (CGM) files.

8. Conclusions and Recommendations

The purpose of the evaluation was to test the Raster files submitted by SAZTEC International. MIL-STD-1840A was not included as part of this test. In checking the CALS headers on the Raster files, it was noted that an incorrect "rdensty" value was inserted preventing the files from meeting MIL-R-28002A specification.
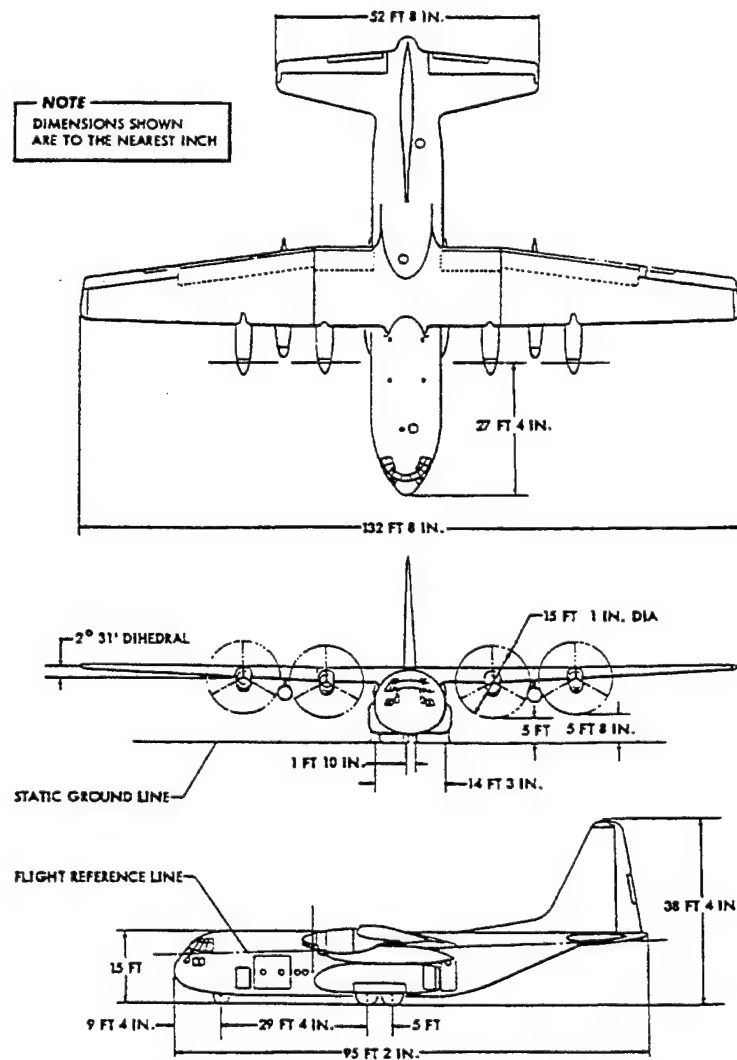
All software applications were able to import, display and print the files without a problem.

9. Appendix A - Detailed Raster Analysis

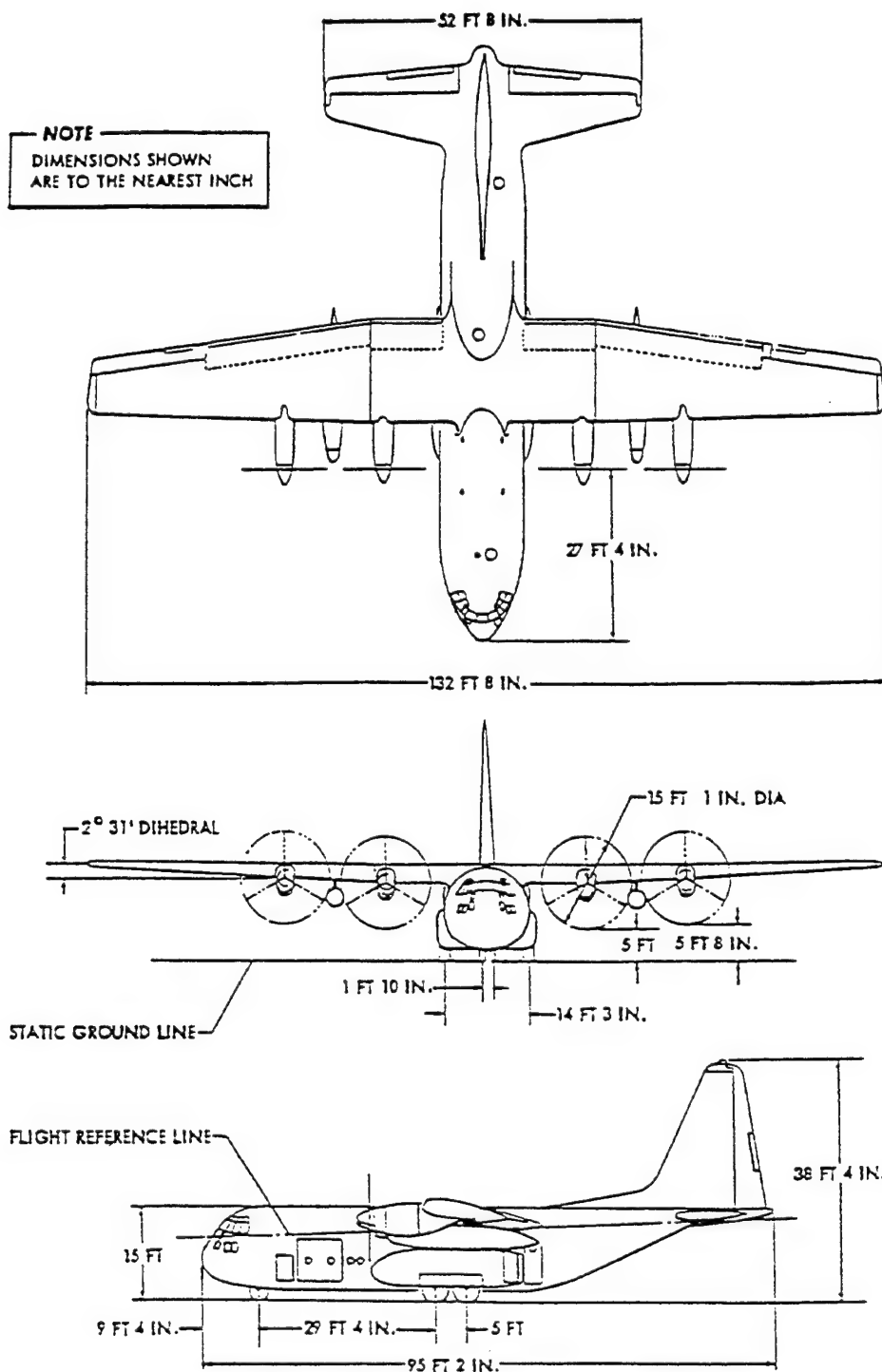## 9.1 File One

9.1.1 Output HiJaak for Windows

TO 1C-130A-4

NOTE
DIMENSIONS SHOWN
ARE TO THE NEAREST INCH

52 FT 8 IN.

27 FT 4 IN.

132 FT 8 IN.

2° 31' DIHEDRAL

15 FT 1 IN. DIA

5 FT   5 FT 8 IN.

1 FT 10 IN.

14 FT 3 IN.

STATIC GROUND LINE

FLIGHT REFERENCE LINE

38 FT 4 IN.

15 FT

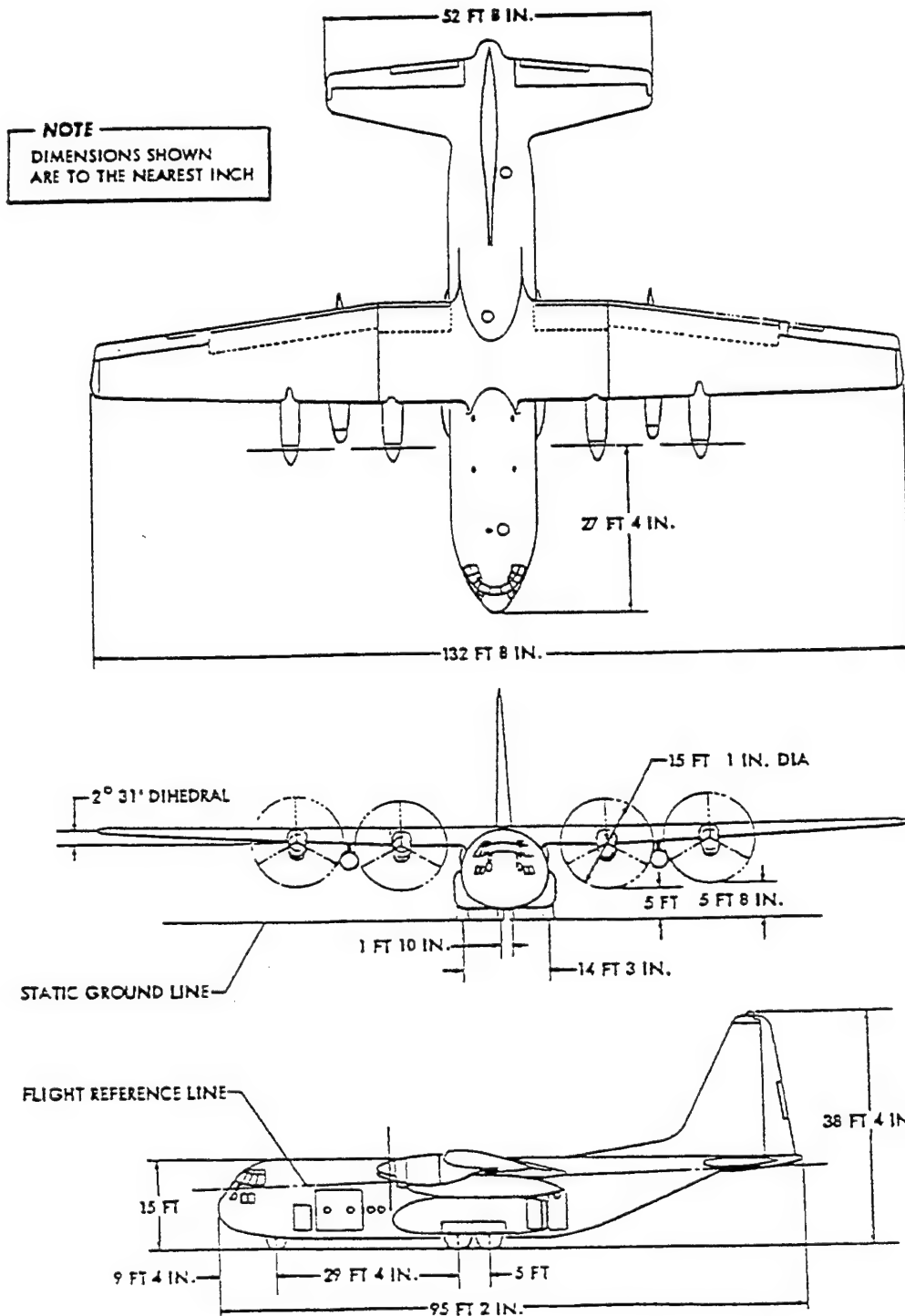9 FT 4 IN.   29 FT 4 IN.   5 FT

95 FT 2 IN.

Airplane Dimensions (Airplanes AF53-3129 through 54-1640)

1-7

TO 1C-130A-4

9.1.2 Output IslandPaint

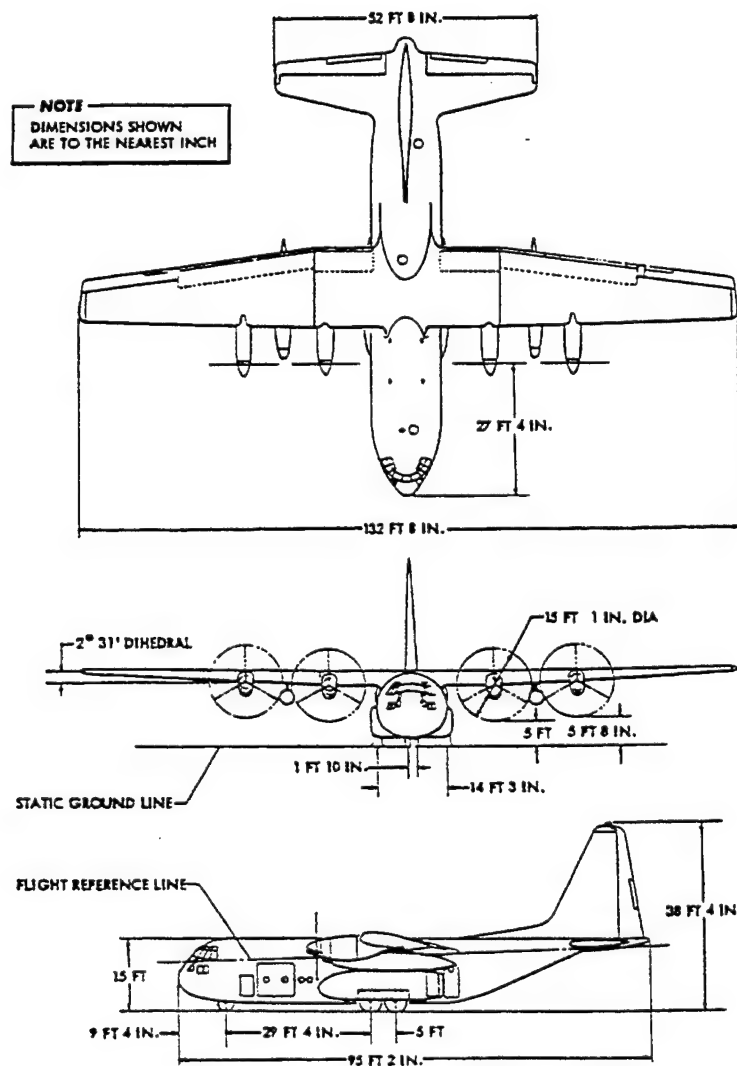*Airplane Dimensions (Airplanes AF53-3129 through 54-1640)*

1-7

9.1.3 Output Preview

NOTE

DIMENSIONS SHOWN ARE TO THE NEAREST INCH

Airplane Dimensions (Airplanes AF53-3129 through 54-1640)

1-7

9.1.4 Output IGESView

TO 1C-130A-4

NOTE
DIMENSIONS SHOWN
ARE TO THE NEAREST INCH

52 FT 8 IN.

27 FT 4 IN.

132 FT 8 IN.

2° 31' DIHEDRAL

15 FT 1 IN. DIA

5 FT   5 FT 8 IN.

1 FT 10 IN.

14 FT 3 IN.

STATIC GROUND LINE

FLIGHT REFERENCE LINE

38 FT 4 IN.
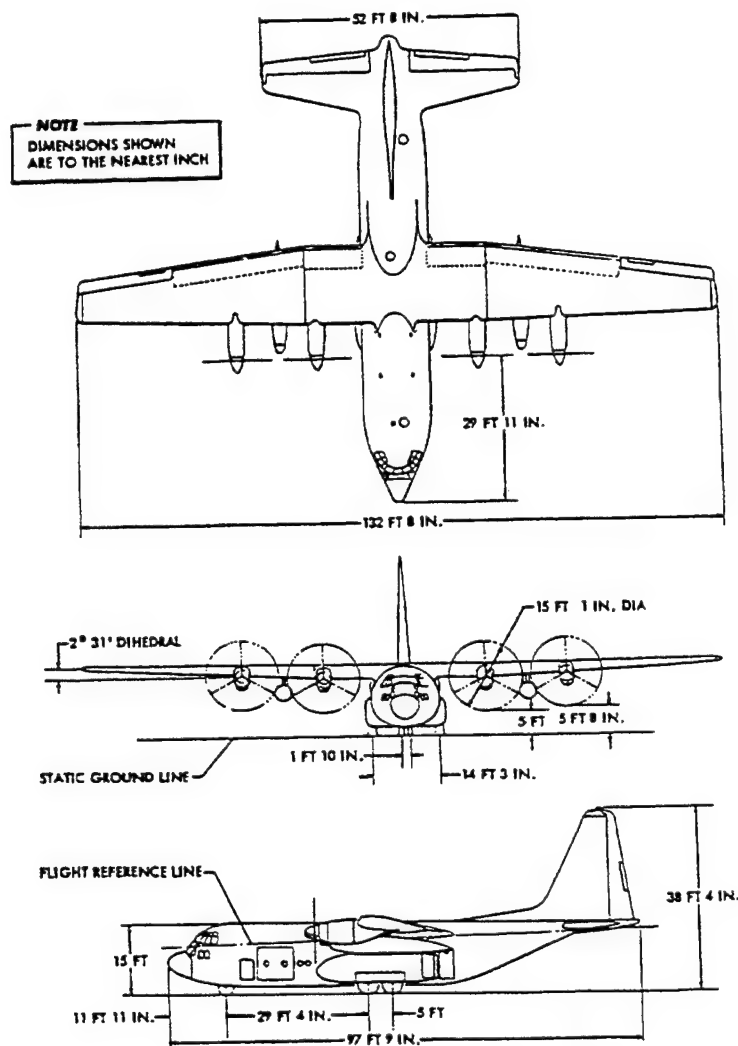
15 FT

9 FT 4 IN.

27 FT 4 IN.

5 FT

95 FT 2 IN.

Airplane Dimensions (Airplanes AF53-3129 through 54-1640)

1-7

9.2 File Two
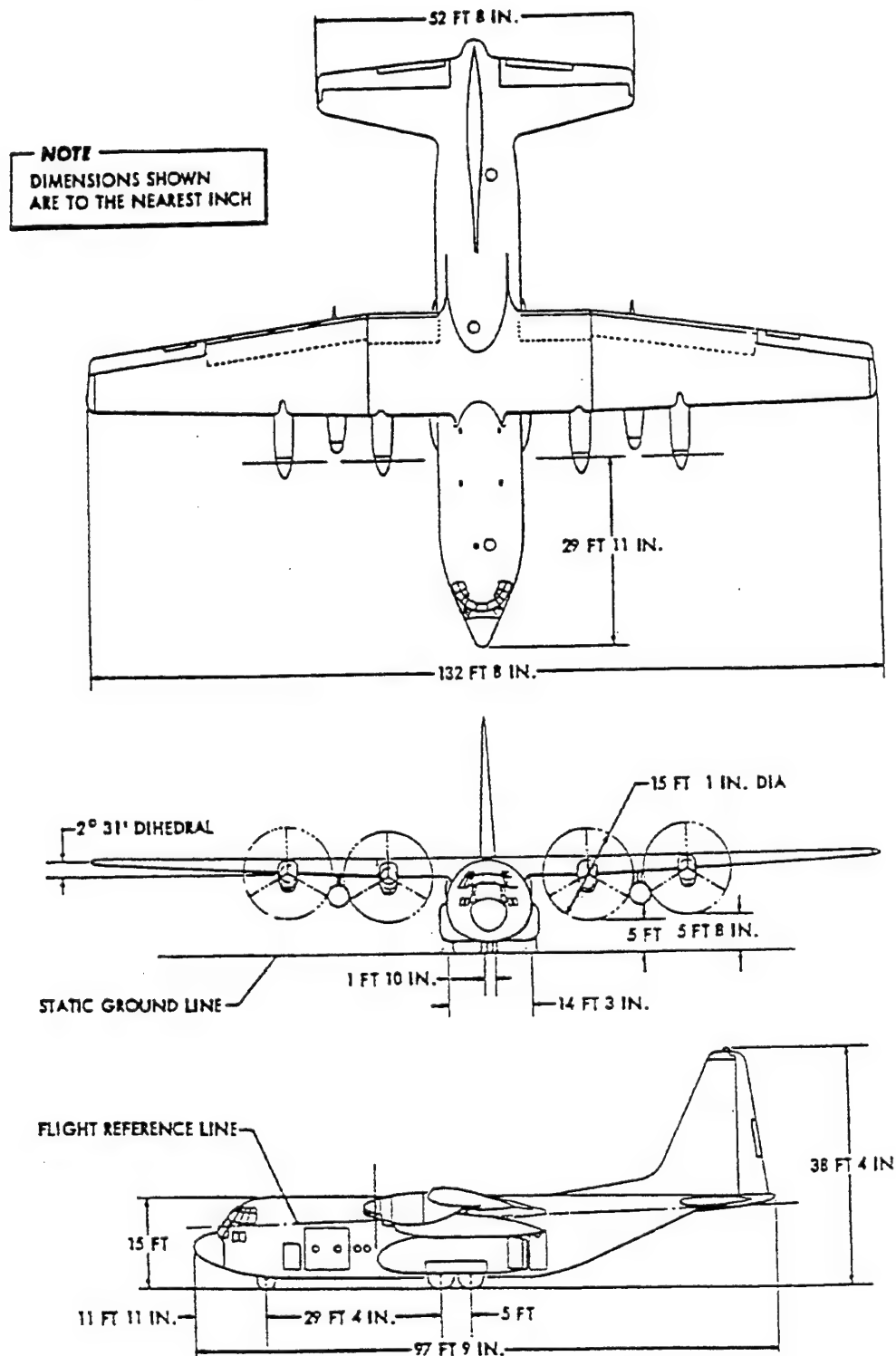
9.2.1 Output HiJaak for Windows

TO 1C-130A-4
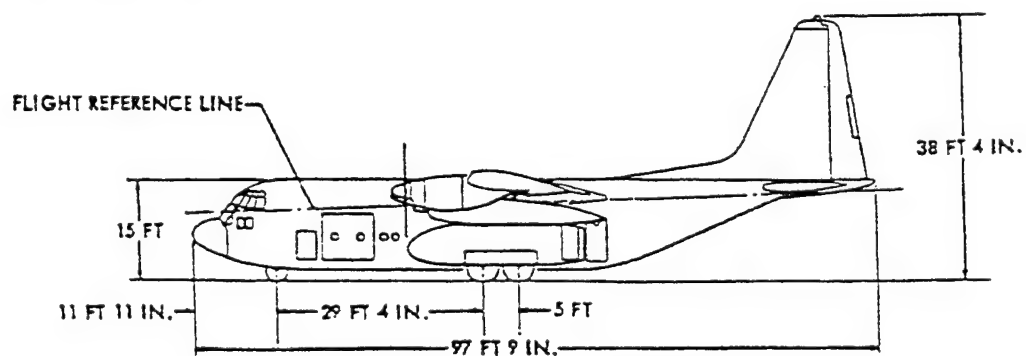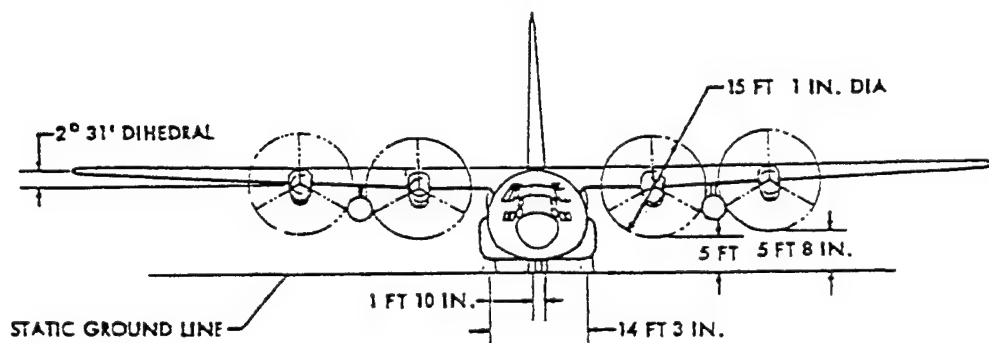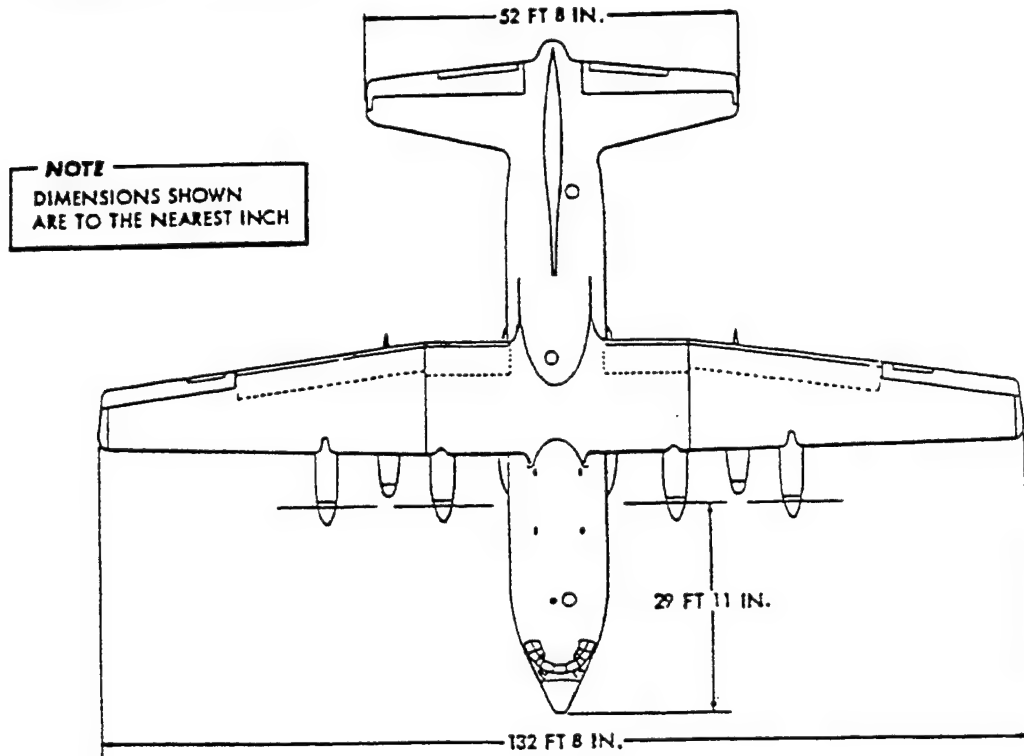

Airplane Dimensions

1-9

TO 1C-130A-4

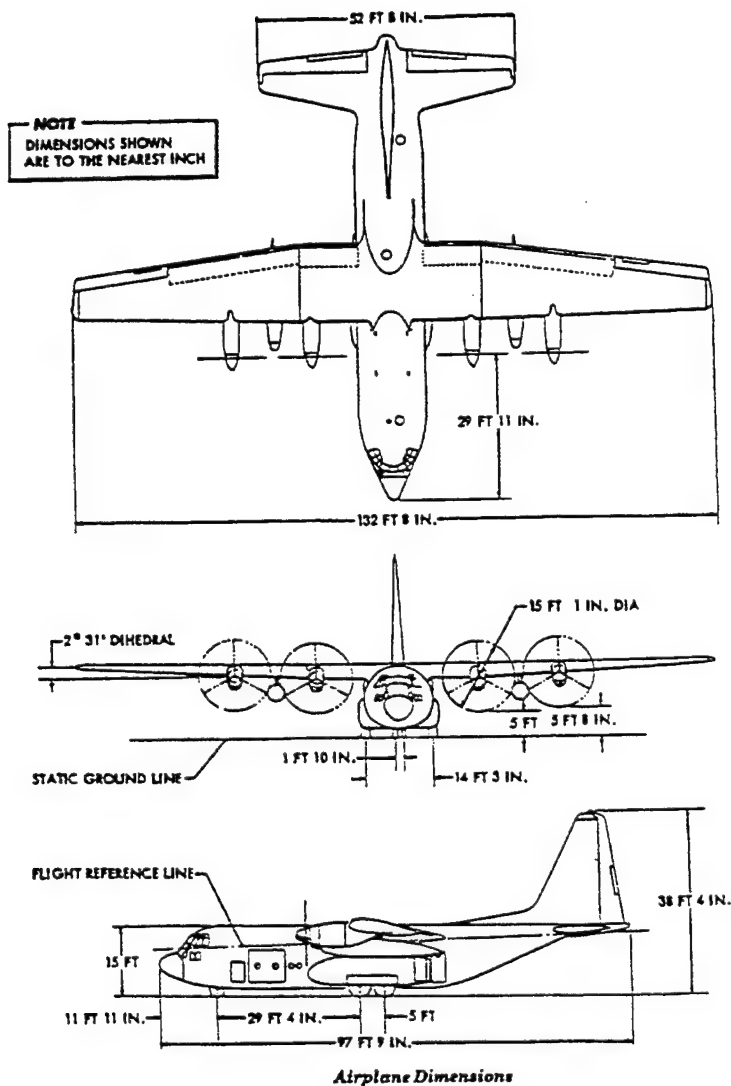## 9.2.2   Output IslandPaint

Airplane Dimensions

1-9

14

TO 1C-130A-4

9.2.3 Output Preview

52 FT 8 IN.

NOTE

DIMENSIONS SHOWN
ARE TO THE NEAREST INCH

29 FT 11 IN.

132 FT 8 IN.

2° 31' DIHEDRAL

15 FT 1 IN. DIA

5 FT   5 FT 8 IN.

STATIC GROUND LINE

1 FT 10 IN.

14 FT 3 IN.

FLIGHT REFERENCE LINE

38 FT 4 IN.

15 FT

11 FT 11 IN.

29 FT 4 IN.

5 FT

97 FT 9 IN.

Airplane Dimensions

1-9

15

9.2.4 Output IGESView

TO IC-130A-4

NOTE
DIMENSIONS SHOWN
ARE TO THE NEAREST INCH

52 FT 8 IN.

29 FT 11 IN.

132 FT 8 IN.

15 FT 1 IN. DIA

2° 31' DIHEDRAL

5 FT 5 FT 8 IN.

1 FT 10 IN.

14 FT 3 IN.

STATIC GROUND LINE

FLIGHT REFERENCE LINE

38 FT 4 IN.

15 FT

11 FT 11 IN.

29 FT 4 IN.

5 FT

97 FT 9 IN.

Airplane Dimensions

1-9

9.3 File Three

9.3.1 Output HiJaak for Windows

Airplanes AF53-3129 through 54-1640

9.3.2 Output IslandPaint

TO 1C-130A-4

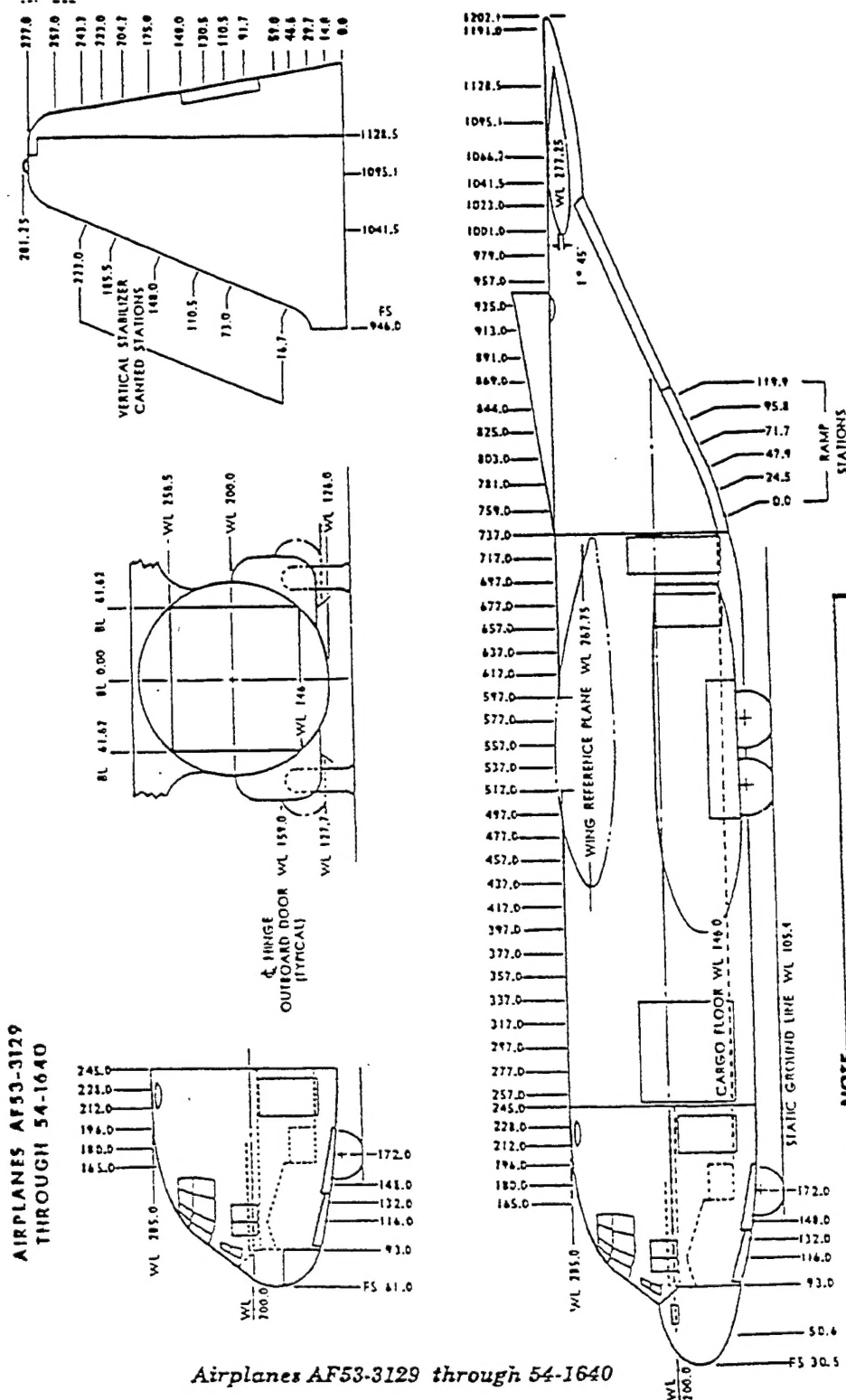*Airplanes AF53-3129 through 54-1640*

NOTE:
FUSELAGE STATION NUMBERS ARE GIVEN ON THE FUSELAGE
RINGS AND INSULATION AT TWENTY-INCH INTERVALS FROM
FUSELAGE STATION 93 TO 1041.5.

1-11
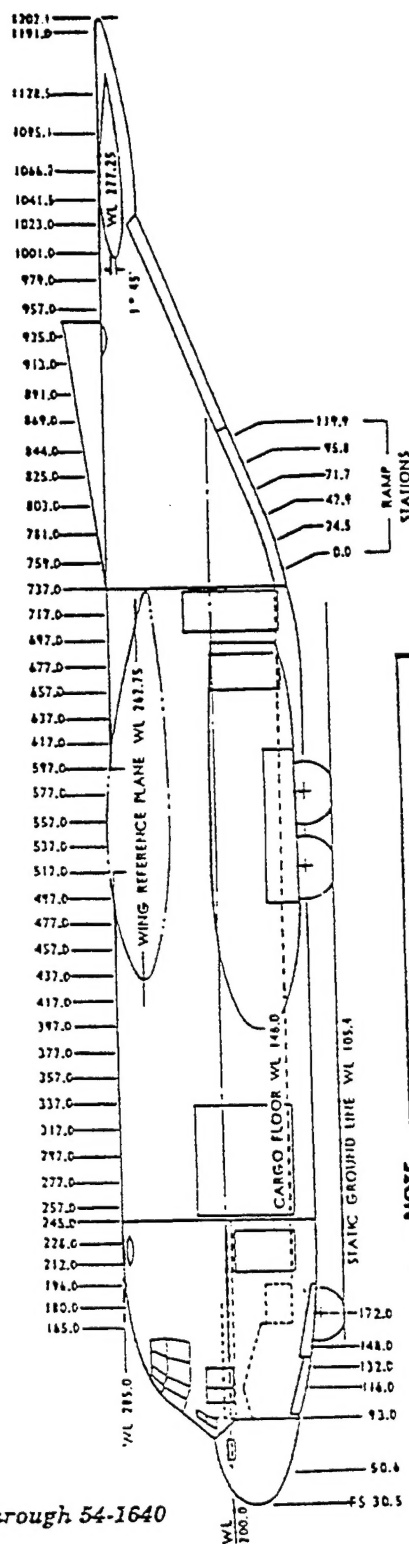
9.3.3 Output Preview

TO 1C-130A-4

Airplanes AF53-3129 through 54-1640

1-11

9.3.4 Output IGESView

TO 1C-130A-4

NOTE
FUSELAGE STATION NUMBERS ARE GIVEN ON THE FUSELAGE RINGS AND INSULATION AT TWENTY-INCH INTERVALS FROM FUSELAGE STATION 93 TO 1041.5.

AIRPLANES AF53-3129 THROUGH 54-1640

Airplanes AF53-3129 through 54-1640

1-11